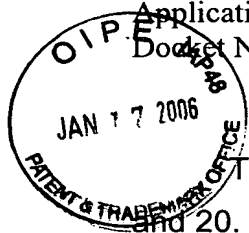


Application No.: 10/718952  
Docket No.: BB1077USDIV

Page 8

**Amendments to the Sequence Listing**

The sequence listing has been amended to add new SEQ ID NOs:17, 18, 19,  
and 20.



### **REMARKS**

Claims 1-10 are pending in the application.

Claim 1 has been amended to recite “...wherein the nucleotide sequence encoding the soybean *myo*-inositol 1-phosphate synthase has at least 90% sequence identity to the nucleotide sequence set forth in SEQ ID NOs:1 or 15 based on the Clustal method of alignment.” Support for this change is found throughout the specification as filed, for example on page 10 at lines 17-31. Thus, it is believed that no new matter has been added.

Claims 3, 4, 9, and 10 have been amended for purposes of clarification. Thus, it is believed that no new matter has been added.

Claims 6 has been amended to incorporate Claim 5. Support for this change is found throughout the Specification as filed, for example on page 4 at lines 27-32. Thus, it is believed that no new matter has been added.

Claim 7 has been amended to recite “..wherein the nucleotide sequence encoding the soybean mutant *myo*-inositol 1-phosphate synthase has at least 90% sequence identity to the nucleotide sequence set forth in SEQ ID NOs:5 or 11 based on the Clustal method of alignment.” Support for this change is found throughout the specification as filed, for example on page 10 at lines 17-31. Thus, it is believed that no new matter has been added.

The Specification has been amended to more clearly identify the sequence listings found on page 35 lines 25 and 30, page 39, line 32, and page 40, line 15. Changes were made to pages 7, 35, 39, and 40 of the Specification as follows:

Four paragraphs were added at page 7 after line 24 to describe new SEQ ID NOs:17, 18, 19, and 20 which concern the sequence listings found on page 35 at lines 25 and 30; page 39 at line 32; and page 40 at line 15, respectively. Support for these changes is found on page 35, lines 24 through 27 and lines 28 through 31; and on page 39, lines 31-32, and page 40, lines 14-19. The sequence listings found on page 35 lines 25 and 30, page 39, line 32, and page 40, line 15 have been identified as SEQ ID NOs:17, 18, 19, and 20, respectively. Thus, it is believed that no new matter has been added.

The Sequence Listing has been amended to add new SEQ ID NOs:17, 18, 19, and 20. Support for this change is found at on page 35 at lines 25 and 30; page 39,

line 32; and page 40, line 15. Thus, it is believed that no new matter has been added.

Enclosed is a copy of the Notice to Comply which accompanied the Office Action, a substitute computer readable form copy of the Sequence Listing, an amended Sequence Listing, an amendment requesting its entry into the application at page 8 of this paper, and a statement that the electronic and paper copies are the same and include no new matter. It is believed that the application now complies with the requirements of 37 C.F.R. 1.821-1.825.

A Substitute Information Disclosure Statement identifying the correct Application Serial Number is included herewith. It is believed that this Substitute Information Disclosure Statement now satisfies the requirements of 37 C.F.R. §§1.97 and 1.98,

Claims 1-2 and 5-8 were rejected under 35 U.S.C. § 112 , first paragraph, as failing to comply with the enablement requirement. Claims 2, 5, and 8 have been canceled and Claims 1, 6, and 7 have been amended.

The sequences of the invention do indeed comprise regions or domains that are associated with functionality of wild-type myo-inositol 1-phosphate synthase (MIPS).

For example, Majumder et al. (1997, Biochim. Biophys. Acta 1348: 245-256) state on page 252, first column, that alignment "of the amino acid sequences deduced from the DNA sequence of the genes encoding I1-P synthase reveals remarkable evolutionary conservation of the primary structure (Fig. 1)." The discussion then goes on to identify several conserved motifs:

- a) the "LWTANTERY" motif is found at residues 228 through 236 of the sequences of the invention;
- b) residues 280 through 291 of the sequences of the invention correspond to the "NGSPQNTFVPGL" motif; and
- c) residues 334 through 343 of the sequences of the invention correspond to the "SYNHLGNNDG" motif.

Majumder et al. (2003, FEBS Lett. 553: 3-10) also indicated, in a different study, that for NAD binding, the putative Rossmann fold signature, the GXGGXG motif, is quite conserved in most of the eukaryotic MIPS sequences. This motif is typical of an oxidoreductase and appears to be an important key feature of MIPS

proteins. This motif is found at positions 68 through 74 of SEQ ID NOs:2, 6, 10, 12, 14, and 16 where it is set forth as GWGGNNG.

In addition to the foregoing, the instant specification discloses the following:

a) two allelic wild-type soybean MIPS sequences (SEQ ID NOs:2 and 16) that vary at amino acids 10, 50, 52, 57, 175, 412, and 444, thus, suggesting that these amino acids may be mutated without affecting functionality of the enzyme; and

b) two mutant soybean MIPS sequences (SEQ ID NOs:6 and 12) that appear to indicate that the glycine residue at position 87 and the lysine residue at position 396 appear to be important for functionality of the enzyme.

It is respectfully submitted that there is no lack of guidance as to which nucleic acid fragments, subfragments, or complements thereof form part of the invention. One of ordinary skill in the art would be able to practice the instant invention without engaging in any undue experimentation to screen through a vast number of soybean clones to identify those that encode a wild-type of mutant MIPS.

Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 112 , first paragraph, as lacking enablement is respectfully requested.

Claims 1-2, and 5-8 were rejected under 35 U.S.C. § 112 , first paragraph, as failing to comply with the written description requirement. It is respectfully submitted that the comments set forth above with respect to the enablement rejection are equally apposite with respect to written description rejection. Withdrawal of the rejection of the claims under 35 U.S.C. § 112 , first paragraph, as failing to comply with written description is respectfully requested.

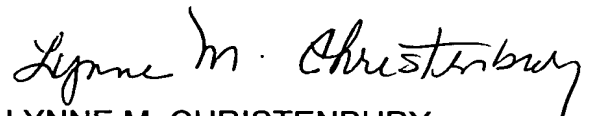
A petition for an Extension of Time for Three (3) months up to and including Monday, January 16, 2006, a substitute copy of the Information Disclosure Statement, a Supplemental Information Disclosure Statement and a new Sequence Listing accompany this response.

It is respectfully submitted that the claims are now in form for allowance which allowance is respectfully requested.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Please credit any overpayment and charge any fees which are required in connection with the filing of the response to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,



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